REMARKS

Reconsideration and allowance are requested. Claims 25, 30 and 31 are cancelled and claims 26 and 32-34 are amended.

Objection to the Drawings

The Examiner objected to Figs. 7a-7c because reference number 108 is missing. Applicants submit replacement sheets for Figs. 7a - 7c (sheets 1-9) and request approval of the changes. This should obviate the Examiner's objection.

Rejection of claims 25, 30 - 31 and 35 under 35 U. S. C. 102(a)

The Examiner rejects claims 25, 30-31 and 35 under 35 U. S. C. 103 as being unpatentable over U.S. Patent No. 5,140,668 to Hattori ("Hattori"). Applicant has cancelled claims 25, 30 and 31 thus rendering this rejection moot.

Claim 35 is amended to incorporate the limitations of claim 26. Thus, claim 35 is patentable for the same reasons set forth below regarding the patentability of claim 26, namely that by a preponderance of the evidence one of skill in the art would not combine Hattori with Kuhn.

Rejection of Claims 1-2 and 5 Under Section 103

The Examiner rejects claims 1, 2 and 5 under 35 U. S. C. 103(a) as being a unpatentable over Casey (U.S. Patent No. 6,321,200) ("Casey), in view of the Lilly et al. article (Robust Speech Recognition Using Singular Value Decomposition Based Speech Enhancement) ("Lilly") and further in view of the Smith et al. article. (Template Adaptation in a Hypersphere Word Classifier) ("Smith"). Applicant respectfully traverses this rejection submits that there is no motivation or suggestion to combine these references. As shall be set

forth below, Casey clearly focuses his invention on non-speech sounds and thus would lead one of skill in the art away from combining his invention with speech-related inventions.

In Applicant's response filed Nov. 26, 2004, Applicant set forth a detailed analysis of why one of skill in the art would not find motivation or a suggestion to combine Casey with Smith. This analysis is incorporated herein by reference. To summarize, Casey focuses his invention on extracting features from a mixture of signals. Column 1 of Casey generally introduces the context for his invention, which is that there is no good representation of *non-speech* sounds such as footsteps, video games, doors slamming, laser guns, hammering, etc. Casey focuses the reader's attention on non-speech sounds as the subject of his invention.

Where Casey leads one of skill in the art away from speech processing, Smith focuses on how to improve speech recognition for multiple speakers or speaker independent vocabularies using word templates. Applicant reminds the Examiner of the standard required to establish a prima facie case of obviousness. The standard is by a "preponderance of the evidence" and requires that the evidence for combining must be more convincing than the evidence which opposes combining. MPEP 2142. Here, when Casey explicitly distances the reader's attention away from speech processing, Applicant submits that the evidence is clear that instead of motivation, one of skill in the art would be urged by Casey to avoid speech processing technology.

Furthermore, there are a number of places in the MPEP that place the burden on the Examiner to set forth a convincing line of reasoning to establish that combining is proper. When analyzing references, the Examiner must consider each reference in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. MPEP 2141.02. Where the Applicant has presented evidence supporting the patentability of the claims, the Examiner must consider that evidence by the preponderance of the evidence standard. MPEP 2142.

Applicant respectfully submits that the Examiner has ignored Applicant's detailed analysis of why, by a preponderance of the evidence, one of skill in the art would not find motivation to combine Casey (with his clear non-speech focus) with Smith (speech recognition word templates). Applicant submits that it is clear after reading column 1 of Casey that one of skill in the art, rather than be motivated, would be led away from references that relate to speech. In the present Office Action, the Examiner has merely mirrored his previous obvious analysis from the August 26, 2004 Office Action, pages 4 and 5. The analysis still stands from Applicant's response but without comment from the Examiner regarding why one of skill in the art would find motivation to combine Casey with Smith.

Notably, the MPEP states: "When an applicant submits evidence ... in reply to a rejection, the examiner must reconsider the patentability of the claimed invention....Facts established by rebuttal evidence must be evaluated along with facts on which the conclusion of obviousness was reached, not against the conclusion itself." MPEP 2142. Furthermore, MPEP 2144.08, part III, requires that the determination under Section 103 should rest on all the evidence (including rebuttal evidence as provided herein) and should not be influenced by Applicant respectfully submits that the Examiner must reconsider Applicant's arguments that oppose the combination of Casey with Smith. Indeed, the Examiner on page 2 of the Office Action stated that Applicant's arguments were moot in view of the new ground of rejection - but then the Examiner again rejected these claims in view of Casey combined with Smith using the exact same arguments as in the previous Office Action (with the addition of Lilly).

The same argument set forth above applies to the finding of motivation to combine Casey with Lilly. Lilly teaches a speech recognition system using singular value decomposition based speech enhancement. Since Casey distances his invention away from analyzing speech, Applicant submits that by a preponderance of the evidence, one of skill in the art would not be motivated to combine Casey with Lilly.

Accordingly, Applicant maintains that since Casey clearly distances his invention from speech applications, that the preponderance of the evidence opposes a finding of motivation to combine Casey with Smith or Lilly. Therefore, claims 1, 2 and 5 are patentable and in condition for allowance.

Rejection of Claims 3-4, and 6-7 Under Section 103(a)

The Examiner rejects claims 3-4 and 6-7 under Section 103(a) as being unpatentable over Casey, in view of Lilly, in further view of Smith and further in view of the Cooper article (The Hypersphere in Pattern Recognition) ("Cooper"). Applicant traverses this rejection and submits that based on the arguments set forth above regarding why there is no motivation to combine Casey with Smith and Lilly, Applicant submits that claims 3 - 4 and 6 - 7 are patentable and in condition for allowance.

Rejection of Claims 8-15 Under Section 103(a)

The Examiner rejects claims 8-15 under Section 103(a) as being unpatentable over Casey, in view of Lilly et al., in view of Smith, in view of Cooper, and further in view of the Ostendorf (A stochastic Segment model for Phoneme-Based Continuous Speech Recognition) ("Ostendorf"). Applicant traverses this rejection for the same reasoning set forth above. Because there is no motivation to combine Casey with Smith, Applicant submits that claims 8 - 15 are patentable and in condition for allowance.

Rejection of Claims 16, 18-22, 26-29 and 32-34 Under Section 103(a)

The Examiner rejects claims 16, 18-22, 26-29 and 32-34 under Section 103(a) as being unpatentable over Hattori, in view of U.S. Patent No. 4,292,471 ("Kuhn"). Applicants note that claims 26 and 32 are amended to each claim independent utilizing the same limitations from the parent claim(s). Applicant traverses this rejection and submits that there is insufficient motivation or suggestion to combine Hattori with Kuhn.

Hattori sets forth that his invention "relates to a phoneme recognition apparatus for analyzing utterances of unspecified individuals." Col. 1, lines 13 - 15. Where the person speaking is unspecified, and where phonemes vary from person to person (col. 2, lines 59-61), Hattori's idea improves phoneme recognition when no information is known about the speaker. In contrast, Kuhn teaches a method of verifying a speaker and places his invention in the context of "verifying a speaker from whom long term spectral characteristics have been derived during a learning phase." Abstract. Kuhn applies his invention for speaker verification to fields such as guarding access to high-security areas, banking operations to obtain automatic identification of a customer and so forth. Col. 1, lines 24 - 43. In preparation for the speaker verification, each speaker must be given text or a number of different texts at different times for training. Because Kuhn's purpose is not speech recognition but speaker identification, he discusses his invention in terms of speech samples such that a particular person can be identified, not that what that person says can be recognized.

There are several reasons one of skill in the art, by a preponderance of the evidence, would not find motivation to combine these references. First, Hattori begins his disclosure by stating that his invention relates to analyzing phonemes for unspecified individuals. He teaches how to perform speech recognition on unknown people where the system has no data on the particular person's speech characteristics. Thus, his focus is on using the first discriminator and second discriminator and so forth to recognize speech where the system has no specific data on the speaker. In contrast, Kuhn requires receiving spectral characteristics of each speaker during a long learning phase. Kuhn is further limited to speaker recognition and not speech recognition. Where Kuhn requires a detailed speech learning phase for individual speakers, there would simply be no need for Hattori's concepts regarding speech recognition for unspecified speakers. This is because Kuhn enables the identification of the speaker and would already include storage of many speech samples for that speaker.

In this regard, the Examiner asserts that incorporating Kuhn's teachings into Hattori would enables Hattori to extract more features from an input phoneme, and thus "ensure that the recognition of a phoneme would be dependent on the overall pattern of an input phoneme rather than being adversely affected by a small number of divergent features." Applicant respectfully submits, however, that the technique of Kuhn regarding mean values and distance thresholds, are not applied to phoneme recognition but to speaker recognition. Therefore, even if those teachings were incorporated into Hattori, they would be utilized for recognizing a speaker, not what the speaker said.

Another reason Hattori should not be combined with Kuhn is that these prior art references have been published for years without the invention being conceived. Hattori issued in 1992 and Kuhn in 1981. There has been much research and development in the area of speech processing while these documents have been publicly available. The lack of implementation of this invention for this many years indicates that it is not obvious.

Accordingly, Applicant submits that by a preponderance of the evidence one of skill in the art would not find motivation to combine Hattori's teachings about phoneme recognition for unspecified individuals with Kuhn's speaker identification invention. When the whole teachings of each prior art reference are considered for their suggestive power, they should not be legally combined.

Therefore, Claims 16, 18 - 22, 26 - 29 and 32 - 34 are patentable over the cited references.

Rejection of Claims 23 and 24 Under Section 103(a)

The Examiner has rejected claims 23 and 24 under Section 103(a) as being unpatentable over Hattori, in view of Kuhn, et al. and further in view of Casey. Applicant traverses this rejection and submits that based on the analysis above, that there is insufficient motivation to combine these references. As set forth above, Casey teaches away from applying his invention to speech applications. Where Hattori and Kuhn each deal with

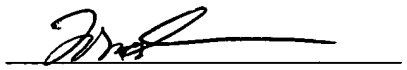
speech (Hattori in the way of speech recognition and Kuhn by way of speaker recognition), Applicant submits that Casey should not be combined with either Hattori or Kuhn. Furthermore, as stated above, Hattori and Kuhn should not be legally combined. Therefore, claims 23 and 24 are patentable and in condition for allowance.

CONCLUSION

Having addressed the rejection of claims 1 - 36, Applicant respectfully submits that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

Date: July 8, 2005

By: 

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